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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
TYLER DIVISION

IMPLICIT, LLC
 	
        Plaintiff,
 	
vs.
 	
HUAWEI TECHNOLOGIES USA, INC.,
 	
        Defendant.
	Case No. 6:17-cv-0182-JRG
	LEAD CASE

vs. PALO ALTO NETWORKS, INC., Defendant	Case No. 6:17-cv-0336-JRG CONSOLIDATED CASE

DEFENDANT PALO ALTO NETWORKS, INC.'S
MOTION TO EXCLUDE PLAINTIFF IMPLICIT, LLC'S DAMAGES-RELATED
TESTIMONY FROM DR. KEITH UGONE AND DR. KEVIN ALMEROTH
UNDER FEDERAL RULE OF EVIDENCE 702 AND DAUBERT

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Defendant Palo Alto Networks, Inc. ("PAN") respectfully requests that the Court exclude Dr. Keith Ugone—the damages expert of Plaintiff Implicit, LLC ("Implicit")—from testifying, pursuant to Federal Rule of Evidence 702 and *Daubert*. Additionally, Dr. Ugone relies in part on a technical apportionment analysis performed by Dr. Kevin Almeroth (Implicit's technical expert), which should likewise be excluded.

Dr. Ugone uses a methodologically flawed royalty base and royalty rate to arrive at his damages opinion. Dr. Ugone first creates a royalty base of ▮▮▮▮ (which includes all revenue from PAN's worldwide sales of all of PAN's firewalls and related services). He then pays lip service to the legally required apportionment principles by discounting this royalty base by a mere ▮▮—an economic apportionment that he adopts *in toto* from Dr. Almeroth's purported technical analysis—thus arriving at a net royalty base of ▮▮▮▮. Dr. Ugone then multiplies that number by an artificially high royalty rate of ▮▮▮ The flaws with his chosen royalty base and rate are summarized below. Dr. Ugone then rationalizes his royalty by comparing it to an agreement between Juniper and PAN (the "Juniper Agreement") that has nothing to do with the patents-in-suit. The Juniper Agreement lacks both economic and technical comparability to the hypothetical license at issue, and should be excluded under FRE 403.

Royalty Base. In granting PAN's motion to strike, the Court ruled that Implicit's infringement allegations are limited to specific technology in software that is found in the PAN operating system (referred to as "PAN-OS") that runs on all of PAN's firewall hardware appliances ("NGFWs"). Dkt. 153 at 2-6. Dr. Ugone calculated that these NGFWs have average selling prices ("ASP") ranging from ▮▮▮▮▮▮▮▮. Despite this price difference, Implicit concedes that the PAN-OS software on all NGFWs is the same in all relevant respects. The higher-priced products instead encompass additional and better hardware that is not alleged to

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[1] Dr. Ugone also applies a present value adjustment.

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infringe and which has nothing to do with the specific software features that Implicit points to for

infringement. Dr. Ugone's royalty base was thus created in three steps:

- adding up all worldwide sales of all of PAN's accused firewall appliances, from April 8, 2014 (the issuance date of the earliest patent-in-suit) though the last date of actual sales data, and adding a projection of these sales through December 2019 (*i.e.*, when the patents-in-suit expire) for a total of

- adding the **$ ** of worldwide revenues from the unaccused support and subscriptions offered with the accused appliances, for a total of   ; and

- applying Dr. Almeroth's 67% "apportionment factor" uniformly to the   in revenue, for an "apportioned" royalty base of

Neither of Implicit's experts has undertaken the analysis required by the Federal Circuit to strip

out all of the unpatented features of the accused appliances, the conventional elements of the

patent claims, and other revenue generators for the accused products that are not encompassed by

the patent claims. Instead, Dr. Almeroth posits (and Dr. Ugone adopts) a circular "but for"

analysis, under which he believes the "value" of the claimed invention includes everything that is

enabled by or relies on the functions accused of infringement, and then opines that this expanded

"value" is itself the prime differentiator of PAN's firewalls in the marketplace, and so constitutes

almost all of the value of the products. This is a complete distortion of Federal Circuit law.

Royalty Rate. A separate methodological flaw arises from Dr. Ugone's intent to offer the

opinion that PAN would have agreed to a   running royalty rate from the date of the

hypothetical negotiation until the patents expire (which includes 1.5 years of projected revenue)

on an already grossly inflated royalty base. To derive this royalty rate, Dr. Ugone relies entirely

on what he admits are Implicit's prior *lump sum* licenses with   licensees. For each of

         he comes up with an "implied royalty rate" based on the lump sum payment divided by

the amount of "impacted revenue" (*i.e.*, the revenue that Implicit's owner believed was at issue

through the time each license and settlement agreement was entered). The fundamental problem

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with this method is that for each of these settlement and licenses, the licensees bought complete peace through the expiration of the patents—not just up to the time the agreement was entered. Thus, to the extent Dr. Ugone believed it was appropriate to attempt to derive an "implied royalty rate" from Implicit's lump sum agreements (which could then be used against PAN as a benchmark for a running royalty until the patents expire), the only methodologically sound way to do so would be to use comparable time periods, *i.e.*, derive an implied royalty based on sales of each licensee through the life of the patents. Instead, Dr. Ugone is using agreements that are (at most) based on estimated revenues as of the date of each license agreement looking backwards to derive a royalty rate, which he then applies to a PAN royalty base that includes future and projected go-forward revenue. Accordingly, his "implied" royalty rate in each instance is grossly overstated because the revenue base by which he divides each licensee's payment is grossly understated. To put this error in perspective, all six of the agreements on which Dr. Ugone relies are lump-sum agreements with an average payment of just over

      yet he has somehow "derived" a royalty rate that translates into a   demand.

The combination of these two errors goes well beyond the types of missteps that can be corrected through cross-examination. This is why the Court's gatekeeper role is so important.

I.   FACTUAL BACKGROUND

All but one of the asserted claims recite an "apparatus"[2] that includes "a processing unit" and "a memory," which the parties agree are conventional elements.[3] The remainder of the claim limitations recite the required actions of the software instructions to route packets to software routines. Thus, the patented improvement (assuming validity) lies in the software, and Implicit

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[2] Asserted claim 15 of the '790 Patent is a computer-readable medium claim that requires "a non-transitory, computer-readable medium" and thus does not even require a "processor" or "memory."

[3] Specifically, Dr. Almeroth admitted that "[t]he Implicit Patents do not relate to a new processor or storage architecture, semiconductor fabrication method, instruction set architecture, processor or disk layout, processor firmware, or disk storage." Ex. 4, ¶ 462.

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alleges these limitations are met by certain portions of PAN-OS included in all of PAN's

NGFWs sold since April 2014. The Court has already ruled that not all of PAN-OS is accused of

infringement; only the App-ID and QoS technologies are. Dkt. 153.

A.   Royalty Base

1.   Dr. Almeroth's Single Infringement Opinion Across All NGFWs

PAN sells various NGFW appliances, but "[a]ll of our firewall appliances … incorporate

our PAN-OS operating system and come with the same set of features ensuring consistent

operation across our entire product line." Ex. 2 at 4. Even within PAN-OS, there are numerous

features and functionalities not accused of satisfying any claim elements (and certainly not

disclosed or taught by the patents-in-suit), including, for example: firewalls (stateful or

otherwise), sandboxing, virtualization, emulators, authentication, certificate management, high

availability, monitoring, threat prevention (including antivirus, anti-spyware, and vulnerability

protection), VPNs, networking, virtual routers, policies, virtual systems, zone protection, and

DoS protection. Ex. 3, ¶¶ 374-75. Likewise, the Court has already struck Implicit's effort to

accuse decryption/encryption and compression/decompression. Dkt. 153, at 5-6. Implicit's

inventor further admitted he did not invent firewalls, decryption and encryption of data,

sandboxing, virtualization, deep packet inspection, antivirus, anti-spyware, vulnerability

protection, VPNs, and networking. Ex. 3, at ¶ 290.

The particular software functionality that Implicit is accusing of infringement has been

present in PAN-OS since PAN introduced its first NGFW in 2007 and remains in each version of

NGFW sold today. Thus, Dr. Almeroth applies a single infringement analysis across all NGFWs.

Even though the accused PAN-OS software is identical, each of the accused appliances

has different performance capabilities. The difference in performance capabilities is reflected in

part by the wide range of average selling prices. For example, Implicit accuses the PA-200 (ASP:

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—a NGFW that runs the accused PAN-OS in a 3-pound form factor—

and the PA-7080 (   )—which also runs the accused PAN-OS in

a 300-pound chassis-based system intended for the service provider market,

[4] Despite the

fact that even the smallest devices include all of the required

elements, Dr. Almeroth opines that "the SSPPU of any given NGFW

model is that full NGFW device as sold by PAN." Ex. 5, ¶ 330. Dr. Ugone thus utilizes the entire

market value of each accused device as an input into his royalty base, from the cheapest (

PA-200   PA-7080

2.   The Unaccused Support Services

Upon purchasing a NGFW, an end user also has the option to separately purchase support

services. A "standard" support contract includes various features, including direct access to

product experts, case management, access to the online customer-support portal, access to

documentation and FAQs, updates to feature releases and software updates, standard support

telephone hours, hardware return/replacement, and access to engineers. Ex. 3 at ¶ 308. The

various support offerings provide differing levels of service. *Id.* at ¶¶ 307-313. Dr. Almeroth has

not opined that any of these services infringe the claims. Nonetheless, worldwide revenues of

these unaccused support services account for over   of Dr. Ugone's unapportioned

base. Ex. 1 at Ex. 17 (adding point of sale and renewal).

3.   The Unaccused Subscription Services

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[4] Ex. 8, 73:15-25. *See also* Ex. 6

                                                                    Dr. Ugone

calculates the ASPs for each accused NGFW. *See* Ex. 1 at Ex. 16.

[5] The PA-200 was first introduced in November 2011 and will not be sold after October 31, 2018. Ex. 1 at Ex. 6.
The PA-220 was introduced in February 2017 and is the replacement for the PA-200. *Id.* Despite having an ASP that
                , the PA-220 has 5X the throughput and 3X the performance. *Id.*.

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End users that purchase a NGFW also have the option to purchase separate add-on software subscriptions to further bolster the functionality of the NGFW: (1) **Threat Prevention**: provides intrusion detection and prevention capabilities; (2) **URL Filtering**: provides uniform resource locator ("URL") filtering capabilities; (3) **WildFire**: provides a sandbox environment for protection against targeted malware and advanced persistent threats; and (4) **GlobalProtect**: expands the boundaries of the physical network, effectively establishing a logical perimeter that encompasses remote laptop and mobile devices. Ex. 3 at ¶¶ 316-342. Dr. Almeroth has not opined that any of these optional subscription services infringe the claims. Nonetheless, worldwide revenues of these unaccused subscription services account for over   of Dr. Ugone's unapportioned   base. Ex. 1 at Ex. 17.

B.   Dr. Almeroth's Apportionment Factor

Dr. Almeroth opines that "the technical importance, expressed as a percentage, of PAN's infringement to their NGFWs as a whole falls within a range from   Ex. 5 at ¶ 355. Based on this *ipse dixit* opinion—which was identical across all accused products, regardless of hardware or ASP, and did not change after Implicit dropped the '104 Patent—Dr. Ugone opines that "

." Ex. 1 at ¶ 12(b)(ii).

In reaching his "   figure, Dr. Almeroth purports to undertake a four-step analysis. Ex. 5 at ¶¶ 332-333. At its core, however, Dr. Almeroth's efforts boil down to (1) comparing PAN's next-generation firewalls to third-party "legacy" firewalls (*id.* at ¶¶ 334-337), (2) opining that PAN markets its App-ID, Content-ID, User-ID, and SP3 technologies as the reason why its firewalls are "next-generation" (as opposed to "legacy" or "stateful"), and (3) concluding that App-ID "is so fundamental to PAN's NGFWs that it accounts for virtually all of

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the technical importance of the NGFWs." *Id.* at ¶ 348. In other words, he simply declares that App-ID—*i.e.*, one piece of technology included within the larger PAN-OS software that is installed on the purpose-built hardware—

.[6] Given

the outrageous nature of this assertion, it is not surprising that Dr. Almeroth made no attempt to calculate or verify his apportionment figure with numerical data: "If you're asking me if I've used numbers firsthand in the calculation, I don't recall that I've done so I've done so based on the information was available to me with respect to technological importance." Ex. 18 at 268.[7]

Dr. Almeroth's failure to apportion can be put into three categories: hardware; non-App-ID portions of PAN-OS software; and unaccused non-infringing functionality within App-ID. Each would be enough to exclude the opinion; taken together, they reflect an indifference to the Federal Circuit's bedrock principle of apportionment.

Hardware. Apart from acknowledging that the control/management plane is not accused, Dr. Almeroth does not address *any* of the other many pieces of hardware present in the appliances that are not being accused of infringement. For example, a high-level depiction of the hardware architecture of the PA-220 and the PA-5260 are depicted below. In each case, Implicit is only accusing the hardware enclosed by the red box, the rest is unclaimed (and there is no
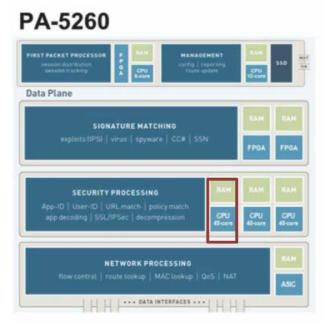
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[6] Dr. Almeroth does distinguish the "control plane" functionality of the firewall (which is how an administrator interacts with and controls the device) from the "data plane" (which relates to how the firewall actually monitors and filters user traffic). Ex. 10 at 31834. Thus, he states that "[t]he claims of the Implicit Patents are not directed to the control plane or any of the control plane functionality [found in the NGFWs], but instead are directed at the data plane." Ex. 5 at ¶ 350. But because he has not seen PAN attempt to differentiate itself in the market based on its control plane, Dr. Almeroth opines that "the technical importance of the control plane is fairly minimal." *Id.*

[7] Dr. Almeroth confirmed that he did not compare the prices for PAN's firewalls (whose sales he opined are the result of what he describes as the allegedly differentiating technology he is attempting to value) with other firewalls in the market that do not have App-ID. Ex. 18 at 259-260 ("**Q**. Did you consider looking at recently released products from any of those companies to see what they charge for their firewalls that have similar throughput to PAN's … as a way of assessing the value of App-ID or Content-ID? **A**: I didn't need to do some sort of price comparison research to look at the technological importance of what I was offering opinions about, which is why I've got the range that I've got."). Citations to the Almeroth deposition are to the ROUGH transcript and identify the PDF page number. Due to the interim nature of that transcript, when providing quotes herein, PAN has provided clarifying edits. PAN will submit an updated brief with citations to the final transcript as soon as it is available.

assertion that the accused "CPU" and "RAM" contain any inventive elements). Ex. 10.

Dr. Almeroth does not even reference the additional hardware shown in these high level diagrams in his report (*e.g.*, ASICS, FPGAs, and data interfaces), and he confrimed at his depostion that he did not account for the value of *any* of the hardware components ("new chipset" innovations, "new memory", "ruggedized" hardware, "10-gig ports," and "field programmable gate arays" a/k/a "FPGAs"). Instead, he believed he did his job s long as his number was less than 100%:

> **Q**. So you didn't do anything to specifically apportion out any of those items that I just listed, correct?
> **A**: Again, I think my best estimate on apportionment is not a hundred percent. I believe there are documents that talk about how App-ID and Content-ID and the characterization of what those features are is what created PAN's competitive advantage and yet I provided a percentage that was less than a hundred percent based on consideration that some of the those factors might have played a role but not so significant that it would be much less than two thirds or three quarters of the technological value of those products.

Ex. 18 at 310-311. The bills of materials further demonstrate the additional hardware included in the higher-end products. For example, the PA-220 has ⬛⬛⬛⬛⬛⬛⬛⬛⬛, whereas the PA-5260 has ⬛⬛⬛⬛⬛⬛ Thus, in Q2 FY2018, for example, PAN paid Flex (its third-party manufacturer) ⬛⬛⬛⬛⬛⬛⬛⬛⬛. Ex. 13. Yet

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Dr. Almeroth confirmed that the actual hardware costs were irrelevant: "**Q**. Would it have been important to know whether or not in fact the cost to PAN of the hardware alone was of the firewall? **A**: Not for the kind of analysis that I did, I believe … ."). Ex. 18, at 262.

PAN-OS functionality other than-App ID. Dr. Almeroth made no attempt to factor out the software functions within PAN-OS that are not part of App-ID. For his part, Dr. Schmidt identified over 8-high level features within PAN-OS that Dr. Almeroth did not address and which are essential to the NGFWs. Ex. 3 at ¶ 383; *see also id.* ¶ 363-384. Dr. Almeroth did admit that the patents-in-suit do not disclose encryption/decryption techniques. Ex. 17 at ¶¶ 591-594. And yet this is not accounted for anywhere in his analysis. The value associated with being able to decrypt traffic at speed cannot be overstated; PAN has publicly stated that "it's not uncommon for us to see in a customer environment north of 35%, 40% of all traffic being encrypted," and that "[e]very release [PAN has] done has improved SSL decryption throughput" with new hardware providing "20x your performance," and PAN-OS 8.1 software release itself also had "capabilities in it … to help with throughput and performance." Ex. 3 at ¶ 364.

The patents also do not disclose any form of virus protection, malware software, or security application; the patent does not even use the words "firewall," "virus", "malware," or "security." As Mr. Bonvanie testified, the "most important feature [of the NGFWs] is the ability to stop successful cyber attacks" and to do that, "you need to understand whether what we see is benign or malicious. And the accuracy of that system is a very important feature, because our customers do not want us to stop benign traffic or miss malicious traffic. And then the ability to operationalize the response to malicious traffic and do that in an automated fashion is a very important feature of the system." Ex. 8 at 47-48. Dr. Almeroth does not account for any of this.

Non-infringing functionality within App-ID. Even within App-ID, Dr. Almeroth makes

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no attempt to differentiate what within App-ID is part of the incremental improvement over the

prior art. *See* Ex. 3 at ¶¶ 365-370.[8] There are two failures regarding App-ID apportionment.

First, Implicit alleges infringement based on the *routing* of packets to the various routines

that allegedly are part of App-ID (at times, Dr. Almeroth says App-ID is the entire PAN-OS

packet flow; at times he says it is App-ID plus Content-ID, and at times he says it just App-ID).

Implicit does not allege that its claims relate to the details or operations of the routines

themselves. Dr. Almeroth argues that the key part of App-ID is being able to see data at the

application layer (Ex. 5 at ¶ 342 (referring the "application-aware layer-7 packet inspection

covered by the inventions of the Implicit Patents")), but does not point to *any* of that

functionality as satisfying any claim limitation. Consistent with this, Implicit does not assert that

it invented the ability to use "policies" based on the type of application received at a firewall,[9]

nor that its patents cover everything about App-ID. As Dr. Almeroth acknowledged:

> **Q**. Implicit didn't invent a routine that does content inspection, correct?
> **A**. The specificity of the patent is not focused on what the particular routines are themselves, but the organization and relationship of those routines. …
> **Q**. And I actually want to understand this for valuation. The patent doesn't explain anywhere how would you go about identifying what a particular application is, correct?
> **A**. I don't recall the specification setting forth a specific example say for a specific application. … .

Ex. 18 at 242-4. The specification never even uses the word "application" (other than patent

application), let alone "layer 7" or "payload". At best, the patents include dependent claims that

require one of the layers be the "application layer," but never teaches or claims how to identify

whether a packet of a message is, *e.g.*, Facebook traffic. Dr. Almeroth nonetheless opines that all

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[8] Dr. Almeroth confirmed this in his deposition. Ex. 18 at 256 ("**Q**. Never identify any part of App-ID that you are not including, right? **A**. I don't believe I explicitly call out aspects of App-ID that's my recollection. … **Q**. The same is true for Content-ID right? You don't exclude any part of Content-ID when Content-ID is part of App-ID or not? **A**. I think it would be the same answer … .").

[9] When asked if the specification "actually talk[s] about us[ing] policies so that particular types of traffic would be treated the same way", Dr. Almeroth responded that "I don't recall there being such a specific example of the application of the invention to that scenario." Ex. 18 at 246.

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of the value of the App-ID routines themselves should be included in the value attributable to the patents, even though the claims (at most) would cover the *routing decisions* between those routines. He justifies this with the type of "but for" explanation rejected by the Federal Circuit.[10]

Second, the Packet Flow diagram for PAN-OS has six boxes, one of which is colored green and entitled "Application Identification." Ex. 19. Whatever else Dr. Almeroth wants to call "App-ID" (an issue addressed in the contemporaneously filed Motion to Strike), there is no debate that the green box is at least part of App-ID. Yet Paragraph 189 of his Amended Report— which identifies the "routines" accused of satisfying the claims—does not accuse any of the routines in the "Application Identification" box (the green box) of infringing the patent:

> **Q**. With respect to the routines identified in paragraph 189, none of those routines are depicted in the flow diagram in Exhibit 12 as appearing in the green box in terms of its depiction in the packet flow walk through?
> **A**. Okay so you're looking at Exhibit 12? …
> **Q**. … And in document 12 none of these routines appear in the green box that in document 12 as identified application identification correct?
> **A**. It's the same figure and I would agree that those—those appear in other boxes … .

Ex. 18 at 237-8. By definition then, there is a substantial part of App-ID that Dr. Almeroth admits is NOT accused of infringement, but is nevertheless included in Dr. Ugone's royalty base.

C.   Dr. Ugone's Royalty Rate and Implicit's Prior Licenses

Between 2007 and 2017, Implicit entered into   agreements, all of which are for

              ,   , and

        Throwing out the high (

           and the low

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[10] *Compare Power Integrations*, 894 F.3d at 1272 ("[W]hen the product contains multiple valuable features, it is not enough to merely show that the patented feature is viewed as essential, that a product would not be commercially viable without the patented feature, or that consumers would not purchase the product without the patented feature."), *with* Ex. 18 at 252 ("[I]n order to do that functionality you must infringe the patents. I mean, you can't get to an identification of Facebook traffic but for infringement.").

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Although none of the licenses purport to set forth a   , Dr. Ugone opined that "impacted revenues" (*i.e.*, past revenues as of the date of the agreement) were "available" as to

For at least the   , by "available" Dr. Ugone meant simply that Implicit's principal gave deposition testimony in a prior case about what his lawyers told him that the opposing party estimated their accused revenues to be (*i.e.*, double hearsay). *See*, *e.g.*, Ex. 9 at 35:7-39:6. Dr. Ugone further confirmed that he did not conduct any investigation regarding the "impacted revenues" (*id.* at 53:1-21), and he otherwise lacked the basic evidence necessary to accurately compare his figures to his proposed royalty base for PAN:

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D.   The Juniper Agreement

In May 2014, Juniper and PAN entered into a Settlement, Release, and Cross-License

Agreement. The Juniper Agreement settled multiple lawsuits (both federal and state) between the

parties—in which Juniper alleged (and PAN disputed) that PAN's founder built PAN based on

technology that he stole from a Juniper affiliate—and also resolved PTAB proceedings.[12] Per the

Juniper Agreement, PAN paid Juniper a one-time settlement amount which, for accounting

purposes, was assigned a fair market value of $182,473,000,[13] in exchange for:

- Mutual dismissal of all pending litigation and a general release of all past liability;

- Cross-license for the patents-in-suit (*i.e.*, Juniper's 11 patents and PAN's 3 patents), and associated family members and counterparts worldwide for the life of the patents; and

- Mutual covenant not to sue for infringement of any other patents for a period of 8 years.

For accounting purposes PAN allocated $54.3 million of the total settlement to the mutual

dismissal of claims; $61.3 million to the cross-license; and the remaining ~$66.9 million to the

mutual covenant not to sue. *See supra* n. _.   Dr. Ugone does not mention the general release or

the covenant not to sue in his report (Ex. 1 at ¶¶ 13-14, 106(b)-108 & Ex. 15 thereto) and

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[12] More specifically, in December 2011, Juniper filed a lawsuit in the District of Delaware alleging that PAN willfully infringed six of its patents and sought injunctive relief and a finding of willful infringement). *Juniper Networks, Inc. v. Palo Alto Networks, Inc.,* No. 1:11-cv-01258-SLR, Complaint (Dkt. 1), at 5-11 (D. Del. Dec. 19, 2011). Juniper later amended its allegations to add two additional patents, while dropping one of the previously asserted patents, bringing the total number of asserted patents to seven. *See id.* at 1st Am. Compl. (Dkt. 70), at 5-12 (Sept. 25, 2012). Juniper alleged that PAN's founder (Nir Zuk) and another senior PAN executive (Yuming Mao) were named inventors on each of the *Juniper* patents asserted by Juniper, and that both Zuk and Mao were previously employed by NetScreen Technologies, Inc., which Juniper acquired in April 2004. *Id.* at 2. According to Juniper, "Zuk and Mao … incorporated into PAN's products the very technologies they learned about—and helped to develop and patent—while at NetScreen and Juniper." Dkt. 1, at ¶ 4. According to Juniper, "Zuk and Mao decided to build a new company based on Juniper's technology." *Id.* at ¶ 15. Ultimately, Juniper asserted 11 patents against PAN in various cases, 10 of which Dr. Almeroth opines "are less relevant to PAN's NGFWs from a technical perspective," and one that "is similar to the inventions of the Implicit Patents." Ex. 5, ¶ 362.

[13] Ex. 14 at 84. The agreement was executed on the heels of a two-week trial (for three of the seven patents filed against PAN) in Delaware. *See Juniper v. PAN*, No. 1:11-cv-01258-SLR, (Dkt. 30) (D. Del. Apr. 3, 2012). Because there was not a unanimous infringement verdict on all three patents, the court declared a mistrial. *Id.* at (Dkt. 303) (Aug. 2, 2014). Notably, the trial dealt only with the question of whether PAN infringed because the court had ruled PAN could not challenge the validity of the patents under the doctrine of assignor estoppel since the founders of PAN were named inventors on the Juniper-asserted patents. *Id.* at (Dkt. 258), at 3-8 (Feb. 6, 2014).

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appeared to not know that either were a part of the agreement. Ex. 9 at 197:7-199:19.

II.   ARGUMENT AND CITATIONS TO AUTHORITY

A.   Dr. Ugone's Royalty Base Is Artificially Inflated

"A patentee is only entitled to a reasonable royalty attributable to the infringing features. The patentee 'must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented feature.'" *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 894 F.3d 1258, 1270 (Fed. Cir. 2018) (quoting *Garretson v. Clark*, 111 U.S. 120, 121 (1884)). "[W]here multi-component products are accused of infringement," as is the case here, "the royalty base should not be larger than the smallest salable unit embodying the patented invention." *Id.* Thus, the Federal Circuit has "cautioned against reliance on use of the entire market value of a multi-component product that includes a patented component because it 'cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue.'" *Id.* (quoting *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1320 (Fed. Cir. 2011)). Indeed, "[a]dmission of evidence of the entire market value 'only serves to make a patentee's proffered damages amount appear modest by comparison, and to artificially inflate the jury's damages calculation beyond that which is 'adequate to compensate for the infringement.'" *Id.* (quoting *LaserDynamics, Inc. v. Quanta Computers, Inc.*, 694 F.3d 51, 68 (Fed. Cir. 2012)).

It is not enough, however, to identify the smallest salable unit. Instead, when the smallest salable unit itself contains several non-infringing features, the patentee must still determine "what portion of that smallest salable unit is attributable to the patented technology."[14]

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[14] *Id.*; *see also VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1327 (Fed. Cir. 2014) ("Where the smallest salable unit is, in fact, a multi-component product containing several non-infringing features with no relation to the patented feature …, the patentee must do more to estimate what portion of the value of that product is attributable to the patented technology. To hold otherwise would permit the entire market value exception to swallow the rule of apportionment."); *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1311 (Fed. Cir. 2018) ("[T]he fact that Finjan

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1. The Royalty Base Includes Separately-Sold Software and Support Services That Are Not Accused of Infringement

Dr. Ugone's royalty base starts with the entire market value of all accused NGFW appliances, *plus* all unaccused support and subscription revenue. The unaccused support and subscription services are separately sold, and thus are NOT part of Dr. Almeroth's alleged SSPPU (*i.e.*, each individual NGFW). These unaccused support and subscription revenues account for nearly   According to Dr. Almeroth, while the support and subscriptions do not independently infringe, they "are built on the use of App-ID's App-ID Engine and CTD Engine." Ex. 5, ¶ 344. Regardless of whether this is true—and it is not—it is clear that these revenues were included in the royalty base as yet another means to capture value beyond the footprint of the invention.[15]

More fundamentally, Dr. Almeroth did not render any opinions as to whether his "technological importance, expressed as a percentage, of PAN's infringement to their NGFWs" could or should be applied to the various support and subscription offerings. Indeed, Dr. Almeroth never reviewed the various features and functionality of these offerings to determine what portion do or do not relate to the accused functionality, and Dr. Ugone undertook no independent analysis of the value of these various features to end users. Nevertheless, Dr. Ugone blindly applied Dr. Almeroth's   applicable to the hardware devices to the nearly   , without any supporting justification or analysis.

Finally, the Court has already ruled that Implicit's WildFire-related allegations are not properly in its infringement case. *See* Dkt. 153.

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has established a royalty base based on the 'smallest, identifiable technical component' does not insulate them from the 'essential requirement' that the 'ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product.'" (quoting *Ericsson*, 773 F.3d at 1226)).

[15] *See*, *e.g.*, *Micro Chem., Inc. v. Lextron, Inc*, 317 F.3d 1387, 1394 (Fed. Cir. 2003) (district court properly ruled sales of non-patented items could not be included in royalty base, but could be used as part of *GP* factor re effect of selling the patented item in promoting sales of other products).

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2.   Implicit's Experts' Apportionment Analysis is Fatally Flawed

The entire market value rule requires patentees to meet a heavy burden. *See*, *e.g.*, *Power Integrations*, 894 F.3d at 1270. Rather than address these requirements, Dr. Ugone simply took Dr. Almeroth's

to his inflated royalty base. But Dr. Almeroth's percentage appears to have been pulled from thin air, and Dr. Ugone does not provide any justification as to why, from an economics perspective, a   " factor can be applied to each aspect of his inflated royalty base. Dr. Almeroth's failure to apportion—which Dr. Ugone, Implicit's actual economics expert, adopts wholesale—is on three levels.

Hardware. Dr. Almeroth made no effort to specifically apportion out hardware, nor even consider its cost to PAN. The magnitude of the failure to properly apportion is most easily seen by looking at what the royalty base would be had Dr. Ugone at least drilled down to the value of the patented technology within PAN's lower-priced NGFWs. As Dr. Ugone himself recognizes in an alternative calculation, even just utilizing the average sales price of the PA-200—which indisputably contains the same allegedly infringing software as the more expensive, feature-rich NGFWs—reduces his (still inflated) royalty base from   . *Compare* Ugone Ex. 17 ("NGFW Hardware") *with* Ugone Ex. 18 ("NGFW Hardware Unit Sales").

Implicit's experts attempt to avoid this result by arguing that the higher-tier products are able to analyze more traffic and, thus, reap more benefits from the patents. Ex. 5 at ¶ 103; Ex. 1 at ¶ 116. But Implicit acknowledged it did not invent *any* of the sophisticated and additional hardware in the more expensive models. By definition, then, the same apportionment rate cannot apply to a   when the accused software is exactly the same.[16]

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[16] For example, both the PA-200 (   ) and the PA-220 (   ) contain all of PAN-OS, all of the allegedly infringing (but conventional) hardware elements (*i.e.*, a Cavium "processing unit" and "a memory storing

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Implicit's argument even fails on its own terms. Several firewalls have the ***exact same*** performance, throughput, and capacity, and yet have wildly divergent ASPs. For example, the PA-220R   is a "ruggedized" version of the PA-220   and thus has the same performance, throughput, and capacity (*i.e.*, what Dr. Almeroth identifies as "the greatest effective difference between the various NGFW products" (Ex. 5 at ¶ 328)). The PA-220R was introduced because the PA-220 did not meet the requirements of harsh environments; the PA-220R meets "**all**" requirements of the PA-220 (Ex. 15 at ¶ 341 & n. 567) ***in addition to*** offering hardware capabilities to operate in these environments. Neither Dr. Almeroth nor Dr. Ugone mentions these differences or accounts for them in apportionment. As another example, the specifications for the PA-3000 series (*see* right) show that the differences between the PA-3050 (ASP: and PA-3060 (ASP: do not relate to performance, throughput, or capacity. Instead, the   difference in ASP exists because the PA-3060 "offer[s] not only the same perf[ormance] / capacity as the PA-3050,

Performance and Capacities	PA-3050	PA-3060
Firewall throughput (App-ID enabled)	4 Gbps	4 Gbps
Threat Prevention throughput	2 Gbps	2 Gbps
IPsec VPN Throughput	500 Mbps	500 Mbps
New sessions per second	50,000	50,000
Max sessions	500,000	500,000
Virtual systems (base/max[1])	1/6	1/6

Ex. 7. Thus, the PA-3060 has an "increased variety of interface options with 10 Gig SPF connectivity"; "front to back cooling"; and "2 hot swappable AC power supplies." *Id.*

Simply put, the footprint of the invention has nothing to do with this hardware. Implicit's

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instructions") plus other unclaimed hardware components. On the higher-end NGFWs, in addition to the allegedly infringing data plane Cavium processor, there are many more and better hardware components that are not claimed – but PAN-OS is exactly the same. Whereas the PA-220 has a   , whose functionality is divided between the (unclaimed) control plane and the data plane, the PA-5260 (4) contains not only a   (*i.e.*, the claimed "processor"), but also a separate (unclaimed)   on the control plane, as well as additional (unclaimed) processors (the "FPGA" and "ASIC" in the diagram above) and additional (unclaimed) memory. The PA-5280 further has "   " of the PA-5260, "which doubles the session capacity of the PA-5260 firewall." Ex. 10.

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experts essentially ignore the essential requirements of identifying the "smallest" salable patent practicing unit, and certainly do not apportion out aspects of that unit that do not practice the claimed invention. By not addressing these differences—let alone mentioning them—Implicit's experts have set forth an unreliable apportionment methodology that results in a nearly

and is sure to mislead the jury about the incremental improvement added by the patented invention.[17]

PAN-OS Other Than App-ID. Drilling down to the software that is common across all devices (*i.e.*, PAN-OS) is not sufficient because PAN-OS contains many features that are "essential to modern firewalls" and "not included within Dr. Almeroth's analysis." Ex. 3 at ¶ 383. Neither of Implicit's experts address these features or how they influence the relative value of the accused NGFWs. "Merely concluding that other components do not affect the value of the accused [NGFWs] amounts to nothing more than pure speculation." *Exmark*, 879 F.3d at 1350.

Unaccused Aspects of App-ID. Within App-ID, there are numerous features that are not accused, as explained above. *See*, *e.g.*, Ex. 3 at ¶ 365-370. Moreover, PAN itself has invested tens of millions of dollars in R&D in an effort to broaden the scope of applications that it is able to identify. *Id.* at ¶ 369. "Without a more detailed analysis, the jury is simply left to speculate or adopt the expert's unsupported conclusory opinion." *Exmark*, 879 F.3d at 1350.

B.   Dr. Ugone's Derived Running Royalty Rate Is Inflated

Dr. Ugone's methodology for deriving an

s is unsound *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1325-26 (Fed. Cir.

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[17] The only rebuttal that Dr. Ugone could muster to these methodological failures was to claim that (1)

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2009) ("Compared to a running royalty analysis, a lump sum analysis involves different considerations."). There is no rhyme or reason to the "   " that Dr. Ugone used to derive the   . Then, Dr. Ugone applied his   to PAN revenues that post-date the execution of the hypothetical license, projected through the patents' expiration. By using a results-driven analysis, Dr. Ugone is not comparing apples-to-apples.

C.   Dr. Ugone Improperly Utilizes the Juniper Agreement as a "Benchmark"

The Federal Circuit "has long required district courts performing reasonable royalty calculations to exercise vigilance when considering past licenses to technologies *other* than the patent in suit."[18] Implicit must show that the Juniper Agreement is "sufficiently comparable to the hypothetical license at issue in suit."[19] "[A]lleging a loose or vague comparability between different technologies or licenses does not suffice."[20] Rather, to rely on any license to any technology other than a patent-in-suit, "a damages expert must opine on both the technological and economic comparability."[21] Implicit fails on both counts.

Technical Comparability. According to Dr. Almeroth, although the 11 patents directly licensed by Juniper to PAN "

." Ex. 5, ¶ 362. But even the broad test used to capture this   as technically comparable "would potentially encompass any patent that relates to modern digital communications over any type of network" and would encompass *at least* 59,000 issued patents. *See* Ex. 3, ¶ 415. Dr. Almeroth likewise acknowledged this field would encompass "thousands"

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[18] *ResQNet.com*, 594 F.3d at 869 (citing *Lucent*, 580 F.3d at 1329 ("[A] lump-sum damages award [based on a reasonable royalty] cannot stand solely on evidence which amounts to little more than a recitation of royalty numbers, one of which is arguably in the ballpark of the jury's award, particularly when it is doubtful that the technology of those license agreements is in any way similar to the technology being litigated here.")).

[19] *Lucent*, 580 F.3d at 1325.

[20] *LaserDynamics*, 694 F.3d at 79.

[21] *Biscotti Inc. v. Microsoft Corp.*, No. 2:13-cv-1015-JRG-RSP, 2017 WL 2607882, at *3 (E.D. Tex. May 25, 2017).

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of patents. Ex. 18 at 311. This is not sufficient evidence of technical comparability.[22]

Economic Comparability. Dr. Ugone ignores the unique circumstances of competitor litigation in which the competitor alleges the founder of PAN stole from the competitor, including the fact that the founder's name was on the patents being asserted by the competitor. *See supra* n. __. Given the stakes involved, PAN disclosed the litigation in each of its 2012, 2013, and 2014 10-K filings. Ex. 14. Dr. Ugone also appeared unaware that the Juniper Agreement included a general release for all past claims of infringement and an 8-year covenant not to sue. *Id.* PAN's then-in-house counsel testified that Juniper   " that would be subject to the 8-year covenant not to sue. Ex. 16 at 203:8-205:1. But because Dr. Ugone was unaware of these portions of the Juniper Agreement—which PAN allocated over 2/3 of the value of the agreement to—he did not provide any opinions as to how this would impact the parties' view of the relevance of the agreement. This failure warrants exclusion.[23]

III.   CONCLUSION

Implicit's expert opinions constitute a complete abdication of the basic rules of apportionment. Implicit should not be given a "do over" before trial. Instead, if the jury returns a verdict for Implicit, Implicit can place before the jury the damages opinions of PAN's expert. Otherwise, parties would be encouraged to provide outlandish opinions in the first instance, knowing that they can fall back to a legally sound opinion if their moon shot is excluded.

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[22] *See*, *e.g.*, *Finjan*, 879 F.3d at 1312 (fact that that the infringing products in allegedly comparable license were also in the computer security field and that licensee was a competitor of defendant not sufficient proof of technological comparability); *Lucent*, 550 F.3d at 1328 ("Lucent's brief characterizes the four agreements as covering 'PC-related patents,' as if personal computer kinship imparts enough comparability to support the damages award."); *ResQNet*, 594 F.3d at 870 (damages expert's reliance upon licenses that did not "even mention[] the patents in suit or show[] any discernible link to the claimed technology" was improper, especially when the expert "offer[ed] little or no evidence of a link between the [licenses] and the claimed invention").

[23] *See*, *e.g.*, *Lucent*, 580 F.3d at 1330-32 (noting that it was "difficult, if not impossible, to evaluate" how the rates of allegedly comparable licenses should apply to the hypothetical negotiation); *Biscotti*, 2017 WL 2607882, at *4 (expert's failure to address "substantial economic differences" between allegedly comparable licenses and the hypothetical license in suit warranted exclusion).

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Dated: August 23, 2018   Respectfully submitted,

                                                /s/ Melissa R. Smith

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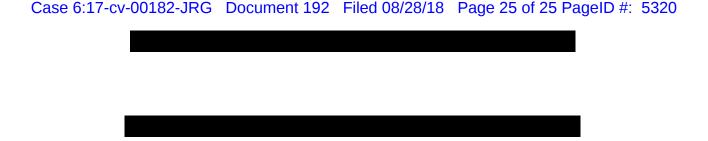   303 South Washington Avenue
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CERTIFICATE OF CONFERENCE

I hereby certify that counsel for Defendant met and conferred with counsel for Plaintiff and Plaintiff has indicated it is opposed to the relief requested in this motion.

/s/ Melissa R. Smith
Melissa R. Smith

CERTIFICATE OF SERVICE

I hereby certify that on August 23, 2018, I electronically filed the foregoing document with the Clerk of Court using the CM/ECF system, which will automatically send e-mail notification of such filing to all counsel of record.

/s/ Melissa R. Smith
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